

Degenerative Myelopathy—Let's Talk About It

As conscientious breeders we strive to breed quality Borzoi. When doing so we take into account breed type, lineage, soundness of body and mind and of course health, ultimately breeding from our best to the best. Degenerative Myelopathy is sadly present in our breed. However, with today's technology breeders have the ability to do away with this disease. We could lead the way and be the first to eliminate DM from a breed. So lets talk about it.

Degenerative Myelopathy (DM) is:

An incurable, progressive disease of the canine spinal cord. Progressive muscle weakness and loss of co-ordination of the rear limbs. Knuckling over or dragging the hind feet are often the first signs seen in affected dogs, with progression over time to complete paralysis.

The Orthopedic Foundation for Animals (OFA) and many other laboratories offer the breeder/owner simple test kits for their dogs. I personally have found OFA to provide a very user friendly web-site, test kits and helpful communications. DM test kits are promptly posted upon payment and are very easy to use, with results given to clients within a month.

Explanation of results:

Normal - no presence of mutation, clear of disease.

Carrier - one copy of the disease gene is present, will not exhibit disease symptoms.

Affected (1 copy) - one copy of the disease gene is present, yet due to the dominant mode of inheritance of the disease the dog may show symptoms.

Affected - two mutated copies of the disease gene are present, the dog may show symptoms associated with the disease.

It is a sad sight to see a Borzoi with symptoms of DM. The likely occurrence when breeding are:

- If both parents are clear (N/N) then all of the puppies will be clear
- If one parent is a carrier (N/A) and one is clear (N/N) then roughly 50%

of the puppies will be clear and 50% will be carriers.

- If both parents are carriers (N/A) then roughly 25% will be clear (N/N), 50% will be carriers (N/A), and 25% will be affected (A/A).
- If one parent is a carrier (N/A) and one is affected (A/A) then roughly 50% of the puppies will be carriers (N/A) and 50% will be affected.
- If both parents are affected (A/A) then all puppies will be affected.

When two DM clear registered dogs are bred their progeny are DM clear and can be registered clear by parentage. However because of the possibility of new mutations or as of yet undiscovered gene mutations, only first generation offspring are deemed to be clear by parentage (CBP).

In the past lack of technology and poor or difficult transportation limited what dogs were available for breeding, hence limiting our gene pool. However, this does not apply today. Today we have great technology at our finger tips. With the importation and use of frozen semen, surgical and trans cervical insemination (TCI), and advanced, quick transportation world wide our gene pool has increased immensely. So is there really a need to breed with carriers or worst still dogs with DM?

The question is, what does a breeder do with progeny who are carriers of DM or those diagnosed with the disease? Is it ethical to pass these dogs to others to continue to breed from? What about the dog who suffers from this disease? As breeders we have a responsibility to do our best for our breed and breeding for health is one of them. Lets do our best for our Borzoi and eliminate Degenerative Myelopathy.

Submitted by: Wendy Finlayson.